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|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/764,919 | LOURENS ET AL. | |
| | Examiner | Art Unit | |
| | My-Trang N. Ton | 2816 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Tel. Int. 03/10/05.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ The drawings filed on 26 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>03/10/05</u> |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


MY-TRANG N. TON
PRIMARY EXAMINER

3/10/05

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Att. Katz on 03/10/05.

The application has been amended as follows:

In the claims

In claim 1, lines 11 and 14, after "output", insert – circuit --.

In claim 3, line 2, before "input", insert – first --.

In claim 4, line 1, after "output", insert – circuit --.

In claim 10, lines 12 and 15, after "output", insert – circuit --.

In claim 12, line 2, before "input", insert – first --.

In claim 13, line 1, after "output", insert – circuit --.

In claim 19, , lines 12 and 15, after "output", insert – circuit --.

In claim 21, line 2, before "input", insert – first --.

In claim 22, line 1, after "output", insert – circuit --.

Reasons for allowance

The following is an examiner's statement of reasons for allowance:

The present invention is drawn to an ultra-low power programmable timer and low voltage detection circuits utilizing a voltage comparison and logic module, an external connection, a digital output of an integrated circuit device, a timing capacitor, a first resistor, a second resistor (or timing circuit), a first enable, a second enable, a reference voltage, a low current source having an enable as recited in claims 1-36. None of the prior art disclosed or suggested to show the particular structure and/or the particular operation recited in these claims namely: "the timing capacitor coupled to the external connection, whereby the digital output circuit of the integrated circuit device charges the timing capacitor and the input of the voltage comparison and logic module discharges the timing capacitor" in combination with "an external connection is coupled to a digital output of the integrated circuit device and to the input of the voltage comparison and logic module" and "the voltage comparison and logic module ..." as recited in claims 1 and 19; the combination of "the voltage comparison and logic module ...", "the external connection ... to the input of the voltage comparison and logic module" and "the timing circuit ... discharges the timing circuit" as recited in claim 10; the combination of all the method steps as recited in claims 29-32; "calculating a temperature from a know temperature by determining a difference between the trip voltage value and a known voltage value, then dividing the difference by a constant" in combination with "determining" method step as recited in claim 33; "calculating a temperature from a know temperature by determining a difference between the current value and a known current value, then dividing the difference by a constant" in combination with "determining" method step as recited in claim 35.


The prior art references cited on PTO-892 are for interest and documentation purposes only. As described above, these references lack at least one of the claimed limitations. For example: the Chowdhury (U.S Patent No. 6,509,783) lacks **"the external connection is coupled to the digital output circuit of the integrated circuit device and to the input of the voltage comparison and logic module"** and **"the timing capacitor (or timing circuit)"** (claims 1, 10, 19); the combination method steps (claims 29-32); the Shkap (U.S Patent No. 6,346,848) or the Ravishanker (U.S Patent No. 6,811,309) lacks **"calculating a temperature from a know temperature by determining a difference between the trip voltage value and a known voltage value, then dividing the difference by a constant"** (claim 33) or **"calculating a temperature from a know temperature by determining a difference between the current value and a known current value, then dividing the difference by a constant"** (claim 35).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Trang N. Ton whose telephone number is 571-272-1754. The examiner can normally be reached on 7:00 a.m - 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


My-Trang N. Ton
Primary Examiner
Art Unit 2816

March 10, 2005